

REMARKS

Favorable reconsideration of this application, in light of the following discussion, is respectfully requested. After entry of the foregoing amendment, Claims 2-4 remain pending in the present application. No new matter has been added.

By summary, the Official Action presents the following issues: Claim 1 stands rejected under 35 U.S.C. § 102(b) as anticipated by Murakami et al. (U.S. Patent No. 4,604,160, hereinafter “Murakami”); Claim 2 stands rejected under 35 U.S.C. § 103(a) as unpatentable Murakami in view of Sasaki et al. (U.S. Patent Application Publ’n No. 2003/0038372 A1, hereinafter “Sasaki”) and Nishitani et al. (U.S. Patent No. 6,831,357 B2, hereinafter “Nishitani”); and Claims 3-4 were allowed.

REJECTION UNDER 35 U.S.C. §§ 102 AND 103

Claim 1 stands rejected under 35 U.S.C. § 102(b) as anticipated by Murakami. Applicants have canceled Claim 1, thereby rendering this ground of rejection moot.

Claim 2, which has been rewritten in independent form, stands rejected under 35 U.S.C. § 103(a) as unpatentable Murakami in view of Sasaki and Nishitani. Applicants respectfully traverse this rejection.

Independent Claim 2 recites a sheet forming method of forming a sheet used as each layer when forming a laminated electronic part. The sheet forming method includes, in part, “a step of depositing a photosensitive substance of which an exposed portion is removed by a developer . . . ; [and] a step of . . . executing an electro-depositing process . . . onto the portion with the photosensitive substance removed . . . wherein said step consisting of the exposure process, the developing process and the electro-depositing process is repeated a plural number of times.” Applicants respectfully submit that Murakami, Sasaki, and Nishitani fail to disclose or suggest those features.

It is further submitted that Murakami, Sasaki, and Nishitani fail to disclose or suggest that a step consisting of the exposure process, the developing process and the electro-depositing process is repeated a plural number of times on **only** said photosensitive substance.

A non-limiting process according to Claim 2 includes preparing a sheet used as each layer when forming a laminated electronic part, which is one layer basically formed by a photosensitive substance deposited by only one photosensitive-substance-depositing step, where the layer includes plural desired patterns each of which is deposited by respective electro-depositing processes which are repeated. Further to that process, the desired patterns are formed in one photosensitive substance layer, and plural kinds of materials are used for forming the desired patterns. In accordance with that process, the maximum number of the plural kinds of materials corresponds to the number of repetitions of the steps consisting of the exposure process, the developing process and the electro-depositing process.

Turning to the applied references, the Office concedes that “Murakami does not teach repeating the processes a plurality number of time.”¹

Applicants submit that Murakami fails to disclose or suggest that a step consisting of the exposure process, the developing process and the electro-depositing process is repeated a plural number of times on **only** said photosensitive substance.

Sasaki concerns a method of manufacturing a multi-layer spiral inductor using a positive type photosensitive insulating material.² The Office apparently acknowledges that the Sasaki method fails to disclose or suggest “executing an electro-depositing process,” as claimed.³

¹ Official Action at 3, l. 6.

² Sasaki, para. [0064]-[0065].

³ Official Action, ll. 7-9; cf. id. ll. 13-14.

Thus, Applicants submit that Sasaki fails to disclose or suggest that “said step consisting of the exposure process, the developing process and the electro-depositing process is repeated a plural number of times,” as recited in amended Claim 2.

It is further submitted that Sasaki fails to disclose or suggest that a step consisting of the exposure process, the developing process and the electro-depositing process is repeated a plural number of times on **only** said photosensitive substance.

Nishitani concerns a manufacturing process in which “a mask having an opening in register with the pattern of the first pattern conductor 5a is first formed on the release layer 31.”⁴ Further to Nishitani, “On the release layer 31 is then formed a thin metal film to overlie the so formed mask, by . . . a plating method.”⁵ According to Nishitani, “The mask formed on the release layer 31 is removed along with the thin metal film formed thereon.”⁶

That is, Nishitani merely describes removing a mask after a thin metal film is formed thereon. The cited portion of Nishitani is silent with regard to the photosensitive substance recited in Claim 2.

Applicants submit that Nishitani fails to disclose or suggest the features of “a step of depositing a photosensitive substance of which an exposed portion is removed by a developer . . . ; [and] a step of . . . executing an electro-depositing process . . . onto the portion with the photosensitive substance removed,” as recited in Claim 2.

Nishitani further explains that “when a photosensitive insulating dielectric material is used for the first insulating layer 5b, the opening 32 is formed by patterning processing based on the photolithographic technique.”⁷

⁴ Nishitani, col. 10, ll. 58-60.

⁵ Id., ll. 61-64.

⁶ Id., col. 11, 4-5.

⁷ Id., col. 11, ll. 30-33.

That is, Nishitani merely describes forming an opening based on a photolithographic technique. Applicants submit that Nishitani is silent regarding whether an exposed portion or an unexposed portion is removed by a developer.

Accordingly, it is respectfully submitted that Nishitani fails to disclose or suggest “a step of depositing a photosensitive substance of which an exposed portion is removed by a developer . . . ; [and] a step of . . . executing an electro-depositing process . . . onto the portion with the photosensitive substance removed,” as recited in Claim 2.

It is further submitted that Nishitani fails to disclose or suggest that “said step consisting of the exposure process, the developing process and the electro-depositing process is repeated a plural number of times,” as recited in Claim 2.

Applicants also submit that Nishitani fails to disclose or suggest that a step consisting of the exposure process, the developing process and the electro-depositing process is repeated a plural number of times on ***only*** said photosensitive substance.

It is respectfully submitted that no proper combination of Murakami, Sasaki, and Nishitani discloses or suggests Applicants’ recited combination of “a step of depositing a photosensitive substance of which an exposed portion is removed by a developer . . . ; [and] a step of . . . executing an electro-depositing process . . . onto the portion with the photosensitive substance removed . . . wherein said step consisting of the exposure process, the developing process and the electro-depositing process is repeated a plural number of times.”

It is further submitted that no proper combination of Murakami, Sasaki, and Nishitani discloses or suggests that a step consisting of the exposure process, the developing process and the electro-depositing process is repeated a plural number of times on ***only*** said photosensitive substance.

It is submitted that the Office has failed to establish a *prima facie* case of obviousness regarding the feature that “said step consisting of the exposure process, the developing process and the electro-depositing process is repeated a plural number of times.” It will be appreciated that, under MPEP § 2142, Applicants are under no obligation to submit evidence of nonobviousness.

Regarding the step consisting of the exposure process, the developing process and the electro-depositing process being repeated a plural number of times on *only* said photosensitive substance, Applicants emphasize that the repeated processes are subjected on only one layer of the photosensitive substance which is deposited by the first depositing step.

The invention of Claim 2 originally defines that the step consisting of the exposure process, the development process, and the electro-depositing process is repeated plural number of times on only one layer of the photosensitive substance which is firstly formed on the support body through the prior photosensitive substance depositing step.

Further, Sasaki and Nishitani show techniques wherein the repeated steps are the steps of depositing a layer of photosensitive material, exposing the depositing layer, developing the exposed depositing layer, and depositing other material onto a concave pattern formed by the developing step.

Claim 2 does not specify that the step of depositing the photosensitive substance is repeated. Such process is clearly supported by the embodiment shown in the Specification of this application. Furthermore, in consideration of the embodiment shown in the Specification, it should be understood in the invention of Claim 2 that the photosensitive substance depositing process is subjected only one time, because two or more times of the photosensitive substance is not disclosed.

Thus, the repeated steps shown in the applied references are different from those of the claimed invention.

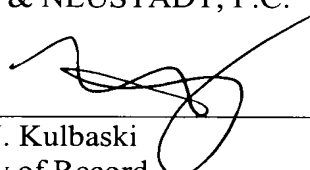
It is noted that an advantage is associated with the claimed invention. The previously described characteristic steps can provide an effect of manufacturing a so-called ceramic green used for forming a laminated type electronic part such as a laminated ceramic inductor, with thin and uniform thickness, high-density packaging, and high electrical performance, because plural patterns with plural materials can be formed within only one photosensitive material layer. It is respectfully submitted that the subject matter described by the applied references cannot provide such a ceramic green sheet.

CONCLUSION

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the present application, including Claims 2-4, is patentably distinguished over the cited art and is in condition for allowance. Such an allowance is respectfully requested at an early date.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



James J. Kulbaski
Attorney of Record
Registration No. 34,648

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 03/06)

Brian R. Epstein
Registration No. 60,329